DERWENT-ACC-NO: 1998-350034

DERWENT-WEEK: 200206

TITLE: Fast-acting surface treatment unit including high frequency discharge plasma jets rotated rapidly - has plasma nozzles with swirl inducers and swirl chambers which cause jet to fan out with low pressure core promoting contact

INVENTOR: BUSKE, C; FOERNSEL, P

PATENT-ASSIGNEE: AGRODYN HOCHSPANNUNGSTECHNIK GMBH[AGRON] , COTTIN DEV
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PRIORITY-DATA: 1998DE-2005999 (April 3, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 29805999 U1	June 25, 1998	N/A	012	B44D 003/16
JP 2002500818 W	January 8, 2002	N/A	014	H05H 001/24
WO 9952333 A1	October 14, 1999	G	000	H05H 001/34
EP 986939 A1	March 22, 2000	G	000	H05H 001/34
US 6265690 B1	July 24, 2001	N/A	000	B23K 009/00

DESIGNATED-STATES: JP US AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
AT BE CH DE DK ES FR GB IE IT LI

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
DE 29805999U1	N/A	1998DE-2005999	April 3, 1998
JP2002500818W	N/A	1999JP-0550042	April 1, 1999
JP2002500818W	N/A	1999WO-EP02256	April 1, 1999
JP2002500818W	Based on	WO 9952333	N/A
WO 9952333A1	N/A	1999WO-EP02256	April 1, 1999
EP 986939A1	N/A	1999EP-0919177	April 1, 1999
EP 986939A1	N/A	1999WO-EP02256	April 1, 1999
EP 986939A1	Based on	WO 9952333	N/A
US 6265690B1	N/A	1999WO-EP02256	April 1, 1999
US 6265690B1	N/A	2000US-0445016	April 20, 2000
US 6265690B1	Based n	WO 9952333	N/A

INT-CL (IPC): B05B007/00, B05D003/14 , B23K009/00 , B29C059/14 , B44D003/16 , C08J007/00 , C23F004/00 , C23 005/00 , H05H001/24 , H05H001/26 , H05H001/34 , H05H001/44

ABSTRACTED-PUB-NO: DE 29805999U

BASIC-ABSTRACT:

Here is a novel unit to gives surfaces a plasma treatment, especially to facilitate surface bonding of plastics with liquids of high surface tension such as printing inks or adhesives. It has a rotary head (10), carrying one or more plasma nozzles (14), mounted eccentrically. The plasma jet produced, is parallel to the axis of rotation

USE - A plasma treatment unit, especially for the activation of plastic surfaces to receive e.g. adhesives or printing.

ADVANTAGE - The well known corona discharge method suits only comparatively thin sheet materials with plane surfaces, especially sheet plastics. This plasma treatment unit has no such limitation, and is relatively low in construction cost. The treatment of larger surfaces (in strips) is rapid and efficient. The effects of treatment are relatively uniform, without localised thermal damage. Curved and profiled surfaces may be treated. Intimate contact is achieved thanks to the low pressure central vortex, and the widening of the jet. The head rotates at about 1000 rpm or more, the secondary rotations set up tending to bundle and stabilise the plasma jet.

ABSTRACTED-PUB-NO: US 6265690B

EQUIVALENT-ABSTRACTS:

Here is a novel unit to gives surfaces a plasma treatment, especially to facilitate surface bonding of plastics with liquids of high surface tension such as printing inks or adhesives. It has a rotary head (10), carrying one or more plasma nozzles (14), mounted eccentrically. The plasma jet produced, is parallel to the axis of rotation

USE - A plasma treatment unit, especially for the activation of plastic surfaces to receive e.g. adhesives or printing.

ADVANTAGE - The well known corona discharge method suits only comparatively thin sheet materials with plane surfaces, especially sheet plastics. This plasma treatment unit has no such limitation, and is relatively low in construction cost. The treatment of larger surfaces (in strips) is rapid and efficient. Th ff ts f treatm nt are relativ ly unif rm, with ut localised th rmal damage. Curv d and profiled surfaces may be tr at d. Intimate contact

is achi ved thanks t th l w pr ssur c ntral vort x, and the wid ning of the jet. The head r tates at about 1000 rpm r mor , the se ndary rotations s t up t nding t bundle and stabilis the plasma jet.

CHOSEN-DRAWING: Dwg.1/3

TITLE-TERMS: FAST ACT SURFACE TREAT UNIT HIGH FREQUENCY DISCHARGE PLASMA JET
ROTATING RAPID PLASMA NOZZLE SWIRL INDUCE SWIRL CHAMBER CAUSE JET
FAN LOW PRESSURE CORE PROMOTE CONTACT

DERWENT-CLASS: A82 P42 P55 P78 X14 X24

CPI-CODES: A11-C04E;

EPI-CODES: X14-F03; X24-D05;

ENHANCED-POLYMER-INDEXING:
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018 ; P0000
Polymer Index [1.2]
018 ; ND05 ; J9999 J2915*R ; N9999 N7227 N7023 ; K9427 ; Q9999 Q6644*R ; Q9999 Q8797 Q8775 ; K9416

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CPI Secondary Accession Numbers: C1998-108181
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